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# Buyer Preference for

CRANBERRY PACKAGING

in Boston and Topeka



Marketing Research Report No. 34

UNITED STATES DEPARTMENT OF AGRICULTURE BUREAU OF AGRICULTURAL ECONOMICS AND FARM CREDIT ADMINISTRATION

WASHINGTON, D. C. MAY 1953



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The research on which this report is based was made possible by funds provided in part by the Agricultural Marketing Act of 1946 (RMA, Title II), and Farm Credit Administration regular funds.

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Acknowledgment is made to the following and their organizations for their cooperation and assistance in undertaking this study:

H. E. Bryant, General Manager, American Cranberry Exchange; T. Russo, Produce Manager, Stop and Shop Stores, Boston Mass.; J. Bisagone, L. Shumrak and F. Foley, Produce Managers of Stop and Shop; O. Flemming and D. Miller, Produce Managers of I.G.A. Supermarkets, Topeka, Kansas; W. Lindsay, Produce Manager of Suttons Food City, Topeka, Kan.; B. Pankuk and K. Stevens, The Fleming Co., Topeka, Kan.; and F. Lovering, Levering and Sawyer, Inc., Boston, Mass.

# BUYER PREFERENCE FOR CRANBERRY PACKAGING IN SOSTON AND TOPEKA

Prepared by the Bureau of Agricultural Economics and the Farm Credit Administration.

#### SUMMARY

This study was made to find out whether consumers prefer to buy cranberries in 1-pound cellophane bags or 1-pound boxes with windows. It was limited to six supermarkets in two cities (Boston and Topeka) and to 16 days ending on the Tuesday before Thanksgiving in 1952.

The results were:

Consumers, free to choose either type of package, bought 3 cellophane bags to every window-box.

Of the 1,758 customers interviewed, 7 out of 10 said they planned to buy cranberries before they came into the store. Only 3 out of 10 said they bought on impulse after seeing them. However, for the week ending the 15th of November half said they bought on impulse.

Of the consumers who said they planned to buy cranberries before they came into the store, 7 out of 10 bought them in bags.

Of the consumers who bought on impulse, 7 out of 10 also bought them in bags.

Of the consumers who bought boxes, only 6 percent said they would have waited or looked in another store if the boxes had not been available.

Of the consumers who bought bags, only 9 percent said they would have waited or looked in another store if the bags had not been available.

More than half of the consumers who bought bags said it was because they could see the cranberries better.

More than half of the consumers who bought boxes said it was because they gave more protection to the cranberries.

### BACKGROUND

During the last few years prepackaging of cranberries has grown to the point where about 95 percent of the fresh cranberries are sold in 1-pound containers. The total volume sold fresh this year will amount to approximately 400 million pounds with an f. o. b. value of almost 9 million dollars. Two different containers have been used by the industry -- the 1-pound cellophane bag and the 1-pound cardboard window box. At present approximately half of the berries are sold in cellophane

bags and half in cardboard boxes. The cost of packing a case of twenty-four 1-pound cardboard boxes is about 15 cents more than for a case of cellophane bags. The industry quoted both containers at the same f. o. b. price in the 1952-53 season and consequently the retail price was the same.

This study was made by the Bureau of Agricultural Economics and Farm Credit Administration in cooperation with the American Cranberry Exchange and other segments of the cranberry industry. Ordinarily it would have been desirable to have undertaken a study of greater magnitude, but because other checks were being made<sup>1</sup> and because the industry is faced with a decision as to the type of package it should use in retailing fresh cranberries, it was decided that a study designed to be of immediate assistance would be more useful. Such a study might help to reduce marketing costs to the eventual benefit of producers and consumers.

Before these studies were undertaken, no objective data were available to show which package consumers would select if given a free choice because an individual retailer ordinarily offers his customer only one type of package. This study, therefore, was designed to find out whether customers prefer one type of container above the other; and if so, why.

#### AREAS INCLUDED IN THE STUDY

The test was conducted in Boston, Mass., and Topeka, Kan. These markets were selected in cooperation with the industry. They were chosen because both types of packages had been sold there. The test was conducted in large self-service supermarkets. In each city these stores were under the same management or supplied by the same wholesaler, so that stocks of berries of uniform quality packed in both types of containers would be available.

In the Topeka area the store designated as No. 1 was a large independent supermarket patronized mainly by industrial workers and farm people. Store No. 2 was a large independent store in west Topeka. It was patronized for the most part by people in the middle and upper income brackets. Store No. 3 was in southwest Topeka near low-, medium-, and high-income residential areas.

In the Boston area the store designated as No. 1 was an exceptionally large supermarket in Cambridge. This store was patronized largely by professional people. Store No. 2, also a supermarket of large size, was

lene market research division of a supplier of cellophane bags conducted a comparable study in Chicago, Cleveland, Kansas City, Boston, and Denver. A questionnaire and study design similar to those of BAE and FCA were used by the market research firm. Conferences with representatives of the company and the industry were held so that both studies would be conducted along similar lines and thus permit comparison of results. In the 5 - city study cranberries in cellophane bags outsold cranberries in window boxes by a ratio of 5.5 to 1 on the basis of sales in 15 high-volume super-markets located in the 5 cities, as reported in the Cranberry World, Vol. 6, No. 11 March 1953, p. 12, Published by American Cranberry Exchange, 5 South 6th Street, New Bedford, Mass.

in Brookline. It was patronized largely by business people. Store No. 3, the smallest of the three supermarkets in the study, was in Chelsea and was patronized mainly by industrial workers.

### DATE OF THE FIELD WORK

Inventory records were kept and interviewing took place starting Monday, November 10 and ending Tuesday, November 25, 1952.

#### PLAN OF WORK

#### Matched Lots Offered for Sale

Matched lots of the two types of packages were offered for sale in six self-service supermarkets, three located in each of the two cities (figure 1). In each store displays of fresh cranberries packed in cellophane bags and in window boxes were maintained from October 27 through November 8. These 2 weeks preceded the test period. During this "conditioning" period the stores maintained uniform displays of both types of packages and charged uniform prices for each.

The test period was from November 10 through November 25. During this period records of weekly sales of each type of container were kept. The last period for which separate records were kept was Monday and Tuesday of the last week, November 24 and 25. An inventory was taken at the beginning and end of each week.

During the conditioning period, visits were made to each of the stores to check displays for uniformity. Visits to each of the stores for the purpose of keeping matched lots of berries on display were made two or more times during each day of the test period.

Customer traffic in these self-service stores tended to be "one-way." In order to avoid the bias which might be introduced because the customers would pass the display in only one direction and might select the first package which came into view, the stores reversed the placement of the bags and boxes during the test period so that each was in first position about half the time.

#### Interviews with Store Customers

During the test period personal interviews were taken with a sample of customers who bought fresh cranberries in the six stores. The interviewing was done in the stores, just after the customer had selected either a bag or a box of berries.

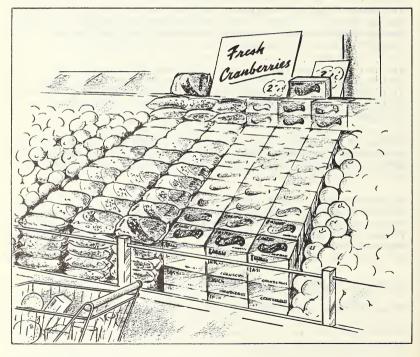
The shoppers were asked why they had made their particular selection, what they would have done if their preferred type of package had not been available that day, and whether the purchase of cranberries was planned or done on impulse.

#### DESCRIPTION OF THE DISPLAYS

In Topeka and Boston the stores in our study did considerable advertising and used rather massive display techniques.

In Boston the matched lots were displayed under glass<sup>2</sup> and adjacent to each other. In Topeka the matched lots were displayed side by side on island tables. Boxes and bags were sold at the same price during the test period. In Topeka, the price for the first 10 days was 33 cents a pound in two of the stores and 31 cents a pound in the third. During the last 5 days, the prices dropped to 25 cents a pound in two stores and to 27 cents in the third. In Boston, the price for the entire test period for all stores was 29 cents.

Figure 1



<sup>2 &</sup>quot;Under glass" is the trade expression for food items displayed on a sloped wall counter with a slanted mirror which reflects the display under it.

While the quality of the berries in the two packages was good throughout the study, the color match was not identical on a few occasions. This resulted in exchange of stock with distributors in an attempt to correct this difference.

Official store observers reported several significant points about the two types of packages. The boxes tended to open where they were glued, particularly if they were displayed adjacent to damp produce. Occasionally windows in the boxes were torn or bags were ripped from handling. Some bags came unglued at the mouths and seams. More boxes than bags were damaged. Produce managers usually patched the damaged packages and returned them to the regular displays.

An additional box problem was caused by the slope of the display cases. When a customer removed a box, particularly from the center of the display, the boxes above the one removed slipped down. This did not happen with the bags because the flexible cellophane provided surfaces which held the packages in place even when one was removed from the center of a stack.

In the Boston market the observers thought that the berries in the boxes deteriorated more rapidly than those in the bags, whereas observers in the Topeka market thought those in bags deteriorated faster. Several things could account for the difference between the keeping quality of the two types of packages and between the two markets -- climate, difference in aeration, high acidity of the boxes, or the simple fact that the supplies of one type of package moved more slowly than the other. Also the bags in the Topeka area had small vents for aeration while those in the Boston area lacked vents.

#### CUSTOMERS' CHOICE

An inventory of all boxes and bags was taken at the opening of business of each store on November 10, 15, and 25. In addition, a record of store purchases was kept for the period of the test.

In Boston, for each of the three periods of the test, bags outsold boxes 3 to 1 (table 1).

Table 1. - Sales of cranberries packed in 1-pound window boxes and cellophane bags in Boston, Mass.

Store	Week e Novemb	ending er 15		ending ber 22	Nover 24 an		Total units for test period	
	Bags	Boxes	Bags	Boxes	Bags	Boxes	Bags	Boxes
	Num ber	Number	Number	Number	Number	Number	Number	Number
No. 1	211	73	397	114	350	88	910	275
No. 2	122	40	161	24	85	84	368	148
No. 3	59	12	92	78	89	7	240	97
Total								
units	392	125	650	216	514	179	1,518	520
Percent	76	24	75	25	74	26	74	26

In Topeka, for the first two periods, bags outsold boxes 3 to 1. In the third period, the choice was 4 to 1. As only part of a week was included in the last period, the final figures for the entire period showed a 3 to 1 choice, the same as Boston (table 2).

Table 2. - Sales of cranberries packed in 1-pound window boxes and cellophane bags in Topeka, Kans.

Store	Week Novem	ending ber 15	Week ending November 22		Nove 24 ar		Total units for test period	
	Bags	Boxes	Bags	Boxes	Bags	Boxes	Bags	Boxes
	Number	Number	Number	Num ber	Number	Number	Number	Number
No. 1	182	69	310	129	134	9	626	207
No. 2	133	43	365	94	43	26	541	163
No. 3	53	22	159	36	18	9	230	67
Total units	368	134	834	259	195	44	1,397	437
Percent	73	27	76	24	82	18	76	24

Total store sales were as follows:

In Boston, store No. 1 sold 1,185 pounds store No. 2 sold 516 pounds store No. 3 sold 337 pounds

Total sales were ..... 2,038 pounds

In Topeka, store No. 1 sold 833 pounds store No. 2 sold 704 pounds store No. 3 sold 297 pounds

Total sales were ..... 1,834 pounds

Total sales in six stores were 3,872 pounds

Sale of cranberries in the No. 3 stores of Boston and Topeka were considerably less than in the other stores. This was to be expected as they were the smallest stores in the study. However, the ratio of bags to box sales was about the same as in the other stores -- 3 to 1.

### CUSTOMERS! OPINIONS

Interviewers were stationed in stores next to the fresh cranberry displays. As a customer selected either a bag or a box, she (or he) was asked why she made her selection and why she didn't select the other type of package.

The customers who were interviewed accounted for about half of the total sales made during the test period. The kinds of packages they chose were in about the same proportion as those indicated by the actual sales figures.

The chief appeal of the bagged berries was the fact that they permitted the customers to see the berries. Even though the boxes were made with cellophane windows, only one customer commented favorably on the visibility of the boxed product.

Habit was the next most important reason given for selecting bags. In this instance the bags had an advantage in capitalizing on the effect of habit on purchase. Cellophane packages of cranberries have been on the market longer than the boxes; therefore, patrons were more used to buying this kind of produce in cellophane bags.

Next in importance was the customers' claim that they saw the bags first, and made their selections because of this influence. This reason was given even though the display positions were alternated to present each package in first position an equal number of times.

From this evidence it seems reasonable to assume that though boxes came into view first as often as did the bags, people "saw" cranberries when they viewed the bags, and "saw" boxes when they viewed boxes. This was intensified because the boxes permitted very few cranberries to show. In addition, in some instances the boxes looked out of place in the middle of a fresh produce shelf and weren't immediately identified as to contents -- particularly at a slight distance.

Of the	Of the	
customers	customers	
who chose	who chose	
BAGS:	BOXES:	
57%		said they could see the berries better
25%	5%	said they bought the package because of habit
18%	8%	said they saw their package first
10%	24%	said that their package was easier to store
12%	25%	said that the quality of the berries was better
	51%	said their package protects the berries from
		damage

Almost as strong as the visual appeal of bags was the resistance-to-damage appeal of the boxes. A large proportion of people who selected boxes seemed to feel that the berries needed the protection of a box. However, as only about a fourth of the store customers chose boxes, this aspect of packaging was actually important to only about one-eighth of all the cranberry customers in the study.

Customers who chose boxes had the impression that the berries in the boxes were of better quality -- that they looked firmer and riper. Customers appeared to assume that darker berries meant riper berries. However, our store observers found that the difference in color was caused, in part, by the shadows in the boxes which made the lighter berries look darker.

Although both bags and boxes carry the same instructions for storage and freezing, customers who chose boxes were much more influenced by the storage appeal than customers who chose bags (table 3). Even though instructions on both packages were the same, they were more easily read on the boxes. Also, the lettering on the bags was partly concealed in the displays.

Customers were asked what they would have done if the type of package they had just selected had not been available when they came to shop—would they have selected the nonpreferred package or would they have waited until they could find their preferred package? More than 80 percent said they would have accepted the nonpreferred package (table 4), thus giving fairly strong evidence that preference for a type of package was not very intense among a large proportion of the customers who were included in the study.

When customers were asked whether they had planned to buy cranberries before they came into the store or decided after they saw cranberries on display, 72 percent said they had planned their purchase in advance and 27 percent indicated that they bought the berries on impulse (table 5).

The Boston and Topeka markets differed considerably as to the percentages of impulse and planned purchases. Thirty-seven percent of the buyers in Topeka said they bought on impulse while only 19 percent of the buyers in Boston reported impulse purchases. This suggests that local habits of consumption and local sales techniques may have considerable effect on whether customers buy cranberries on impulse or plan their purchases.

The time of season also affected the percentage of impulse buying in both markets. As the Thanksgiving holiday approached, planned buying increased and impulse buying decreased in both cities, although the decrease was more pronounced in Boston. Impulse buying in Boston decreased from approximately 39 percent in the first to 9 percent in the last period, while in Topeka impulse buying decreased from 53 to about 34 percent.

Impulse buyers and planned buyers showed no difference as to selection of package -- both preferred bags. Nearly three in four who indicated that they had planned their purchases selected bags and nearly three in four customers who bought on impulse selected bags (table 6).

Table 3. - Reasons customers gave for selecting bags or boxes

Customers' reasons	Bost customers		Tope	ka selected	Tot customers	
	Bag	Вох	Bag	Box	Bag	Box
/	Percent <sup>1</sup>					
Appearance and quality of berries:						
Can see better; berries show up more; can see more berries	55		60		57	
Berries look better, firmer, riper, not overripe	13	22	12	30	12	25
Bad previous experience with package (quality of berries)	4	1	3	6	4	3
Habit:						
Habit; always select this type of package	18	4	33	6	26	5
Prefer everything in bags, in cellophane-	2		1		1	
Appearance and cleanliness of package:						
Package selected looks neater, more attractive, more appetizing	4	8	5	10	5	8
Package selected is cleaner, more sanitary, don't have to clean berries	2	6	1	2	2	4
Convenience and storage aspects of package:						
Package selected fits better in freezer, in refrigerator, is easier to store	14	25	6	22	10	24
Package selected is easier to handle, not as bulky	8	8	2	4	5	7
Package selected is easier to carry	3	5	1	5	2	5
Bags are easier to dispose of	3		2		3	
Bags can be re-used	1		3		2	
Resists spoilage:						
Berries keep better in package selected, stay fresher	8	10	7	9	8	9
Box doesn't damage as easily, protects berries from damage, protects from handling		55		44		51
Other:				}		
Saw package selected first, didn't see or notice other	17	7	19	11	18	8
Going to use berries immediately	2		1		2	
Thought boxes were for freezing, only for freezing	2		1		1	
Bags hold more, seem to hold more	2		1		1	
Thought bags were cheaper, more expensive to package cranberries in boxes	1		5		3	
Box is new, want to experiment, to try it		2		10		5
Miscellaneous appeals of package selected	1 4	7	4	11	4	8
Miscellaneous reasons for rejecting package	. 2	1	2	1	2	1
No reason for choice, no preference	2	2	3	2	2	2
Don't know	(2)		1	2	1	1
Number of customers	616	321	633	188	1,249	509

 $<sup>^1</sup>_{\rm Percentages}$  total to more than 100 because many customers gave more than 1 reason for selection. Less than one-half of 1 percent.

Table 4. - What customers said they would do if store did not have the type of package preferred.

Customers said they would have:	Boston customers selected		Topeka customers selected		Total customers selected	
•	Bag	Box	Bag	Box	Bag	Box
	Percent	Percent	Percent	Percent	Percent	Percent
Bought nonpreferred package	81	89	76	80	79	85
Waited until store had preferred package	6	4	8	7	7	5
ooked in another store	3	1	1	1	2	1
On't know	9	5	12	7	10	6
epends			1	1	(2)	1
ot ascertained	1	1	2	4	2	2
Total	100	100	100	100	100	100
umber of customers	616	321	633	188	1,249	509

<sup>&</sup>lt;sup>1</sup>This table is based on the question: "Today, if you had come into this store and found <u>only BOXES</u> being sold - would you have - Bought a box, Walted until store had bags, Looked in another store, Don't know?" "Today, if you had come into this store and found <u>only BAMES</u> being sold - would you have - Bought a bag, Walted until store had boxes, Looked in another store, Don't know?" "Less than one-half of I percent.

Table 5. - Planned and impulse purchase, by weeks1

Replies	Boston	Topeka	Total
	Percent	Percent	Percent
TOTAL for test period purchase was:			
Planned	81	61	72
Impulse	19	37	27
Not ascertained	(2)	2	1
Not ascertained	(27	-	
Total	100	100	100
Number of customers	937	821	1,758
Week ending November 15 purchase was:			
Planned	60	47	51
Impu1se	39	53	49
Not ascertained	1	••	(2)
Total	100	100	100
Number of customers	115	215	330
Week ending November 22 purchase was:		,	
Planned	79	66	73
Impulse	21	31	26
Not ascertained	(2)	3	1
Total	100	100	100
Number of customers	456	460	916
November 24 and 25 purchase was:			
Planned	91	63	83
Impulse	9	34	16
Not ascertained		3	1
Total	100	100	100
Number of customers	366	146	512

<sup>&</sup>lt;sup>1</sup>This table is based on the question: "Today when you were thinking of going shopping, did you decide to buy fresh cranberries before you came into the store — or did you decide after you got here and saw them?"
"Less than one-half of 1 percent."

Table 6. - Planned and impulse purchase by type of package selected

	Boston Purchase was:		Top	oeka	Total <sup>1</sup> Purchase was:	
Customer selected			Purch	ase was:		
	Planned	Impulse	Planned	Impluse	Planned	Impluse
	Percent	Percent	Percent	Percent	Percent	Percent
Bag	66	65	79	74	71	71
Box	34	35	21	26	29	29
Total	100	100	100	100	100	100
Number of customers	762	172	498	306	1, 260	478

<sup>&</sup>lt;sup>1</sup>Twenty cases have been eliminated from this table where information on planned or impulse purchases was not ascertained.

#### MANAGERS' OPINIONS

Along with information about consumers' choice and consumers' opinions, it was decided that knowledge of produce managers' reactions would be helpful in completing the description of our experience with these two packages.

The TOPEKA produce managers in our study had this to say about their CUSTOMERS:

People like to see cranberries in cellophane bags where all the berries are visible; bags are the customers' choice and the customer is always right; bags make a colorful, attractive display and encourage impulse buying.

They said this about their own STORE problems:

Boxes become unglued and require taping; boxes break and cause loss; don't like the condition of boxes after cold storage; some loss from broken bags after being placed on display; berries are more visible in bags, thus enabling stores to keep ripest berries moved to top of display; there is no difference in deterioration due to type of package.

At the beginning of the test two of these managers said they had preferred bags -- one preferred boxes. At the end of the test, all three favored bags. In BOSTON the produce managers in our study said this about their customers:

A casual glance would lead a customer to select a bag if bright berries are preferred; bags sell better.

Regarding their STORE problems, they said:

Berries seem to keep better in bags; a few boxes showed deterioration; bags stack better, particularly when the display is on a slope; bags are easier to handle physically.

At the end of the study, as in Topeka, the three Boston produce managers expressed a general preference for bags.

U.S. Dept. of Agriculture Bur. Ag. Econ. & F.C.A. Cooperating

November 1952

	Study 161 - CONSUMER REACTION TO PACKAGING OF FRESH CRANBERRIES								
	STORE INVENTORY								
	Store								
	Address								
	Quantity on hand at close of business								
			November 8	Nov	ember 15	November 22			
_	Cellophane b	ags							
	Cardboard bo	oxes							
	U.S. Dept. of Agriculture  Bur. Ag. Econ. & F.C.A.  Cooperating								
	Study	161 - C	ONSUMER REACTION TO I	PACKAG	ING OF FRESH	CRANBERRIES			
			STORE PURCI	HASES					
			(Separate Sheet fo	or Eac	h Week)				
	Store								
	Address								
	Date	Cases of 24 - 1 lb. containers							
	рате	. с	ellophane number		Cardb	oard number			
		number number				number			

U. S. Department of Agriculture Bur. of Agric. Econ. and F. C. A. Cooperating

Budget Bureau No. 40-5285 Expiration Date: 6-30-53 November 3, 1952

STUDY 161 - CONSUMER REACTION TO P.	ACKAGING OF FRESH CRANBERRIES
Time interview AM was taken: PM	Date:
The state of the s	City:
Respondent was: Male Female *	Store:
	Interviewer:
Respondent Bag selected a: Box	Interview No.:
The Department of Agriculture is making a suddifferent ways cranberries are packed. This	
IF CUSTOMER SELECTED A BAG  1. I noticed that the cranberries you chose does it happen you selected a bag?	
2. How does it happen you didn't select tho	se in a box?
<ol> <li>Today, if you had come into this store as you have -</li> </ol>	nd found only BOXES being sold - would
Bought a box?) ) (Go to Waited until store had bags?)	Looked in another store?
IF CUSTOMER SELECTED A BOX  4. I noticed that the cranberries you chose happen you selected a box?	
5. How does it happen you didn't select tho	se in a cellophane bag?
<ol> <li>Today, if you had come into this store a you have -</li> </ol>	nd found only BAGS being sold - would
Bought a bag?	Looked in another store?
Waited until store had boxes?	Don't know
ASK EVERYONE 7. Today when you were thinking of going sh cranberries before you came into the sto here and saw them?	
	Decided before
	Decided after
THANK AUT AND	y Milent



